WHAT IS CLAIMED

1. A method of supplying power to a load comprising the steps of:

(a) coupling output ports of a plurality of power supplies to an output node that is arranged to be coupled to said load;

(b) controlling one of said power supplies so as to supply to said output node a regulated output voltage that is sufficient to meet current demand of said load; and

(c) controlling another of said power supplies so as to cause the flow of a reduced current therefrom to said output node less than said current demand of said load, but sufficient to enable said another power supply to supply said output voltage that is sufficient to meet said current demand of said load in the event of an inability of said one of said power supplies to supply said regulated output voltage that meets said current demand of said load.

2. The method according to claim 1, wherein step (a) comprises coupling the output port of said another of said plurality of power supplies to said output node through a diode, and wherein step (c) comprises controlling said reduced current flow from said another of said plurality of power supplies to said output node in accordance with the voltage drop across said diode.

3. The method according to claim 2, wherein step (c) comprises comparing said voltage drop across said diode with a prescribed voltage reference and, in response to said voltage drop having a prescribed relationship with respect to said reference voltage, causing said another of said power supplies to increase its output voltage sufficiently to force a current flow through said diode that will enable said another of said plurality of power supplies to immediately respond to a change in load current demand, in the event of said inability of said one of said power supplies to supply said regulated output voltage that meets said load current demand.

4. The method according to claim 2, wherein step (c) comprises coupling a voltage drop across said diode to an operational amplifier circuit that is configured to compare said voltage drop with a prescribed voltage reference and, in response to said voltage drop being less than said reference voltage, supplying a feedback control signal to said another of said power supplies that is effective increase its output voltage sufficiently to forward bias said diode.

5. The method according to claim 4, further including the step of:

(d) comparing the voltage at the output port of said another of said plurality of power supplies with a further reference voltage and, in response to said voltage exceeding said further reference voltage, controlling said

feedback signal so that the output voltage of said another of said plurality of power supplies is regulated in accordance with the voltage at said output node.

6. A method of supplying power to a load comprising the steps of:

(a) diode-ORing output ports of redundant regulated power supplies to an output node that is arranged to be coupled to said load, so that one of said redundant regulated power supplies provides said output node with a regulated output voltage that is sufficient to meet current demand of said load; and

(b) monitoring the voltage drop across a diode that diode-ORs the output port of another of said redundant regulated power supplies to said output node, and controlling a reduced current flow from said another of said redundant regulated power supplies through said diode to said output node in accordance with the monitored voltage drop across said diode.

7. The method according to claim 6, wherein step (b) comprises controlling the flow of said reduced current from said another of said redundant regulated power supplies through said diode at a value that is less than the current demand of said load, but sufficient to forward bias said diode.

8. The method according to claim 6, wherein step (b) comprises comparing said voltage drop across said

diode with a prescribed voltage reference and, in response to said voltage drop having a prescribed relationship with respect to said reference voltage, causing said another of said redundant regulated power supplies to increase its output voltage sufficiently to force a current flow through said diode that will enable said another of said redundant regulated power supplies to immediately respond to a change in load current demand, in the event of said inability of said one of said redundant regulated power supplies to supply said regulated output voltage that meets said load current demand.

9. The method according to claim 6, wherein step (b) comprises coupling a voltage drop across said diode to an operational amplifier circuit that is configured to compare said voltage drop with a prescribed voltage reference and, in response to said voltage drop being less than said reference voltage, supplying a feedback control signal to said another of said redundant regulated power supplies that is effective increase its output voltage sufficiently to forward bias said diode.

10. The method according to claim 9, further including the step of:

(c) comparing the voltage at the output port of said another of said redundant regulated power supplies with a further reference voltage and, in response to the voltage at the output port of said another of said redundant regulated power supplies exceeding said further reference

voltage, controlling said feedback signal so that the output voltage of said another of said redundant regulated power supplies is regulated in accordance with the voltage at said output node.

11. A power supply system comprising redundant regulated power supplies, outputs of which are diode-ORed to an output node arranged to be coupled to a load, with one of said redundant regulated power supplies outputing a regulated output voltage that is sufficient to meet current demand of said load, each power supply having an associated monitoring circuit that monitors the voltage drop across its OR-ing diode, and wherein the monitoring circuit for another of said redundant regulated power supplies, other than said one of said redundant regulated power supplies, controls its operation so that said another poer supply provides a reduced current flow through its diode to said output node that is less than the current demand of the load, but is sufficient to forward bias said diode.

12. The power supply system according to claim 11, wherein said monitoring circuit for another of said redundant regulated power supplies comprises an operational amplifier circuit coupled to compare a voltage drop across said diode with a prescribed voltage reference and, in response to said voltage drop being less than said reference voltage, to supply a feedback control signal to said another of said redundant regulated power supplies

that is effective increase its output voltage sufficiently to forward bias said diode.

13. The power supply system according to claim 12, wherein said operational amplifier circuit is further coupled to compare the voltage at the output port of said another of said redundant regulated power supplies with a further reference voltage and, in response to the voltage at the output port of said another of said redundant regulated power supplies exceeding said further reference voltage, to control said feedback signal so that the output voltage of said another of said redundant regulated power supplies is regulated in accordance with the voltage at said output node.

14. A system for supplying power to a load comprising:

redundant regulated power supplies having output ports thereof diode-ORed to an output node that is arranged to be coupled to said load, one of said redundant regulated power providing said output node with a regulated output voltage that is sufficient to meet current demand of said load; and

a circuit coupled to monitor the voltage drop across a diode which diode-ORs the output port of another of said redundant regulated power supplies to said output node, and being operative to control the operation of said redundant regulated power supplies, so as to provide a reduced current flow from said another of said redundant

regulated power supplies through said diode to said output node in accordance with the monitored voltage drop across said diode.

15. The system according to claim 14, wherein said monitor circuit is operative to cause the flow of said reduced current from said another of said redundant regulated power supplies through said diode to be at a value that is less than the current demand of said load, but is sufficient to forward bias said diode.

16. The system according to claim 14, wherein said monitor circuit is operative to compare said voltage drop across said diode with a prescribed voltage reference and, in response to said voltage drop having a prescribed relationship with respect to said reference voltage, to cause said another of said redundant regulated power supplies to increase its output voltage sufficiently to force a current flow through said diode that will enable said another of said redundant regulated power supplies to immediately respond to a change in load current demand, in the event of said inability of said one of said redundant regulated power supplies to supply said regulated output voltage that meets said load current demand.

17. The system according to claim 14, wherein said monitor circuit comprises an operational amplifier circuit coupled to compare a voltage drop across said diode with a prescribed voltage reference and, in response to said

voltage drop being less than said reference voltage, to supply a feedback control signal to said another of said redundant regulated power supplies that is effective increase its output voltage sufficiently to forward bias said diode.

18. The system according to claim 17, wherein said operational amplifier circuit is further coupled to compare the voltage at the output port of said another of said redundant regulated power supplies with a further reference voltage and, in response to the voltage at the output port of said another of said redundant regulated power supplies exceeding said further reference voltage, to control said feedback signal so that the output voltage of said another of said redundant regulated power supplies is regulated in accordance with the voltage at said output node.

19. A circuit for monitoring the output of a regulated power supply comprising:

a diode coupled between the output of said regulated power supply and an output node adapted to be coupled to a load;

an operational amplifier circuit coupled to compare a voltage drop across said diode with a prescribed reference voltage and, in response to said voltage drop being less than said reference voltage, to supply a feedback control signal to said regulated power supply that is effective increase its output voltage

sufficiently to forward bias said diode.

20. The circuit according to claim 19, wherein said operational amplifier circuit is further coupled to compare the voltage at the output of said regulated power supply with a further reference voltage and, in response to the voltage at the output of said regulated power supply exceeding said further reference voltage, to control said feedback signal so that the output voltage of said regulated power supply is regulated in accordance with the voltage at said output node.

21. The circuit according to claim 19, wherein said monitor circuit is operative to compare said voltage drop across said diode with a prescribed voltage reference and, in response to said voltage drop having a prescribed relationship with respect to said reference voltage, to cause said regulated power supply to increase its output voltage sufficiently to force a current flow through said diode that will enable said regulated power supply to immediately respond to a change in load current demand.